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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,511	04/06/2005	James R. Howarth	HOW1.005-US	5770

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EXAMINER	
MERCEDES, DISMERY E	

ART UNIT	PAPER NUMBER
2627	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/530,511	HOWARTH ET AL.	
	Examiner	Art Unit	
	DISMERY E. MERCEDES	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 April 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *30-36 and 41-53* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *30-36,41-43,45,47-48,51 and 52* is/are rejected.

7)☒ Claim(s) *44,46,49,50 and 53* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 April 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Preliminary amendment filed 4/6/2005 is acknowledged.

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 4/06/2005 and 12/19/2005 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

Claim Objections

2. Claim 32 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The claimed limitation of Claim 32 is already being claimed in parent claim 30 (second limitation).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 30-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Rejection applies to any subsequent dependent claims.

In Claim 30, the limitation "receiving an input waveform, a frequency modulated carrier waveform, and frequency modulated carrier frequency" it is not clear if three different signals are

being received, and if so, why are the other two dangling from the claims. If otherwise, please be more clear to distinguish that one signal (as it seems the frequency modulated carrier waveform) is being received. Furthermore, the limitation "to obtain the time delay" and "corresponding to at least one given sample point" lacks proper antecedent basis in the claim, since there is no previous mention of time delay in the claim, and there is no previous recitation of sample point(s) in the claim. Appropriate correction is required.

Furthermore, the limitation "in the case of irregular samples of the input waveforms" lacks proper antecedent basis in the claim, since it implies that there has been a detection for irregular samples of the input waveform, which is not the case. Furthermore, "in the case" is conditional language, which does not have any associated structure to perform the function. What happens if is not the case? For purposes of examination the examiner would interpret this limitation as a conditional limitation, wherein there is no case, therefore no weight will be given to this limitation.

In Claim 34, the claim recites "demodulation performed using either software" which implies that demodulation is performed using software or by another method, or implies that the demodulation is being performed two different software and either one of them would be used. Furthermore, "either software" suggests that software has being previously mentioned in the claim which is not the case, therefore it lacks proper antecedent basis in the claim. Please make appropriate correction.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 41-43, 45-48, 51-52 are rejected under 35 U.S.C. 102(b) as being anticipated by Winslow et al. (US 4,353,089).

As to Claim 41, Schwartz et al. discloses a method of providing an improved audio reproduction derived from an analog recording, the method comprising:

providing a digitized wideband playback signal derived from a recording containing wow/flutter (col.2, lines 21-24); deriving, without use of a prescribed tone or code intended to be indicative of timing, a reference signal from the digitized wideband playback signal, the reference signal being synchronized with the wideband playback signal (col.2, lines 24-28); generating a modulated carrier by stabilizing and idealizing the reference signal (col.2, lines 40-50); deducing periodic deviations between the modulated carrier and a high-precision clock signal (col.4, lines 40-61 and col.8, lines 2-8); and adjusting timing and pitch in the digitized wideband playback signal in response to the deduced periodic deviations, thereby producing a wideband playback signal substantially corrected for distortion corresponding to said wow/flutter (col.7, lines 33-60; col.8, lines 5-12).

As to Claim 42, Winslow et al. further discloses wherein the reference signal is generated by identifying a reference sound entity which can be derived from the wideband analog playback signal (col.4, line 10-15; 64-66); and wherein the modulated carrier is generated from a known or preestablished pattern within the reference sound element (col.4, lines 10-15 and 29-40).

As to Claim 43, Winslow et al. further discloses: determining a set of data reflecting the instantaneous deviation between a nominal intermediate frequency and the reference signal; and generating a modulated carrier that reflects the deviations so determined (col.4, lines 44-60).

As to Claim 51, Winslow et al. further discloses readable storage medium containing data representing digital audio information which has been generated by the method of claim 41 (col.4, lines 5-7; 63-67).

As to Claim 52, Winslow et al. further discloses wherein the medium is an optical disk, a memory card, or a digital audio tape cassette (col.2, lines 38-42).

As to Claims 45,47-48, has similar limitations as to those treated in the rejections of Claims 41-43, and are me by the references as discussed above. Claim 45, however, recites reference signal corresponding to a bias signal from either the analog playback signal or digitized wideband playback signal, which is met by Winslow (as depicted in fig.3, the reference signal is generated from reference local oscillator 33).

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claim 30,32-36 are rejected under 35 U.S.C. 102(e) as being anticipated by De Mey et al. (US 6,603,820).

As to Claim 30, De Mey et al. discloses a method for signal reconstruction comprising: receiving an input waveform, a frequency modulated carrier waveform, and frequency modulated carrier frequency (figs.2-3 and col.3, lines 14-16); demodulating the frequency modulated carrier

waveform to obtain a speed variation function (fig.2, demodulation channel 6 and col.2, lines 25-27); integrating the speed variation function to obtain the time delay corresponding to at least one given sample point (fig.2, delay line 9 and integrator 13 and col.3, lines 26-38); in the case of irregular samples of the input waveform, interpolating between the irregular samples, thereby establishing a set of output samples at a regular interval (For purposes of examination the examiner would interpret this limitation as a conditional limitation, wherein there is no case, therefore no weight will be given to this limitation).

As to Claim 32, De Mey et al. further discloses demodulating the frequency modulated carrier waveform to obtain a speed variation function (fig.2, demodulation channel 6 and col.2, lines 25-27).

As to Claim 33, De Mey et al. further discloses demodulating the frequency modulated carrier waveform to obtain a speed variation function, said demodulation performed using hardware (as depicted in figs.2-3).

As to Claim 34, De Mey et al. further discloses demodulating the frequency modulated carrier waveform to obtain a speed variation function, said demodulation performed using either software (as depicted in figs.2-3, demodulation channel).

As to Claim 35, De Mey et al. further disclose providing lowpass filtration of an output of the speed variation function (fig.2, integrator 13, which provides low pass filtration of the signal).

As to Claim 36, comprising the interpolating between the irregular samples performed in accordance with the time delay, thereby establishing a set of output samples at the regular interval corresponding to a to a desired sampling rate (For purposes of examination the examiner will not weight will be given to this limitation, since interpolation only occurs "in the case of").

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over De Mey et al. in view of Wilkinson (US 5,218,486).

As to Claim 31, De Mey et al. fails to disclose providing bandpass filtration for the frequency modulated carrier waveform. However, Wilkinson discloses an arrangement to remove drift and flutter wherein the received reference signal is bandpass filtered (col.2, lines 65-68; col.5, lines 34-36). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the system of De Mey et al. by implementing bandpass filter in the received signal as disclosed by Wilkinson, the motivation being to minimize the effects of fading and dropouts and increase the signal to noise ratio in the output (col.2, lines 67-68; col.5, lines 35-36 of Wilkinson).

Allowable Subject Matter

11. Claims 44,46,49-50,53 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Hioki (US 4,481,615); Kaaden et al. (US 5,949,606); Rapeli et al. (US 5,270,666);Woodruff (US 3,347,997).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DISMERY E. MERCEDES whose telephone number is (571)272-7558. The examiner can normally be reached on Monday - Friday, from 9:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Thi Nguyen can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dismery E. Mercedes/
Primary Examiner, Art Unit 2627